

What is claimed is:

- 1 1. An apparatus to allow a node to locate an agent in a network address translation
2 (NAT) domain, the apparatus comprising:
3 a network translation device to receive a first request from the node;
4 the network translation device to determine whether an first address of the first
5 request is a non-routable address; and
6 if so, to discard the first request and to broadcast a message to the agent.
- 7 2. The apparatus of claim 1, further comprising:
8 the network translation device to forward the first request to a home agent if the
9 first address of the first request is not the non-routable address, the home agent
10 coupled to the network translation device via a wide area network (WAN).
- 11 3. The apparatus of claim 1, wherein the node is a mobile node and is either one of
12 a cellular phone, laptop computer, personal digital assistant (PDA), or an Internet table.
- 13 4. The apparatus of claim 1, wherein the agent is a gateway foreign agent (GFA).
- 14 5. The apparatus of claim 1, wherein the network translation device is a router to
15 support NAT and GFA functionality.
- 16 6. The apparatus of claim 1, wherein the first address is a Care of Address (CoA).

1 7. The apparatus of claim 1, wherein the message is a mobile agent advertisement
2 unicast message for the GFA to allow the node to use foreign assisted routing.

1 8. The apparatus of claim 1, wherein the message is a mobile agent advertisement
2 unicast message for the GFA to a subnet, the subnet coupled to the network translation
3 device and is derived from a second address of the first request.

1 9. The apparatus of claim 1, wherein the first request is a registration request of the
2 node to the home agent.

3 10. The apparatus of claim 7, wherein the node, subsequent to the advertisement, is to
4 generate a second request with a first address to be derived from an address of the
5 network translation device, and the network translation device to forward the second
6 request to the home agent via the WAN.

1 11. The apparatus of claim 7, wherein to broadcast the message to the agent, the
2 network translation device forwards an error code to the mobile node derived from the
3 second address of the first request.

1 12. The apparatus of claim 8 wherein the node, subsequent to the advertisement, is to
2 generate a second request with a first address to be derived from an address of the
3 network translation device, and the network translation device to forward the second
4 request to the home agent via the WAN.

1 13. The apparatus of claim 8, wherein the network translation device forwards an error
2 code to the mobile node derived from the second address of the first request.

1 14. The apparatus of claim 10, wherein the second request is a registration request
2 of the node to the home agent.

1 15. The apparatus of claim 12, wherein the second request is a registration request
2 of the node to the home agent.

1 16. A method for locating an agent for a node in a network address translation (NAT)
2 domain, comprising:
3 generating a first request from the node;
4 forwarding the first request to a network translation device; and
5 determining whether a first address of the first request is a non-routable address, if so,
6 deleting the first request and broadcasting a message to the agent.

1 17. The method of claim 16, further comprising:
2 forwarding the first request to a home agent if the first address of the first request is not
3 the non-routable address, the home agent coupled to the network translation device via
4 a wide area network (WAN).

1 18. The method of claim 16, wherein the node is a mobile node and is either one of a
2 cellular phone, laptop computer, personal digital assistant (PDA), or an Internet table.

1 19. The method of claim 16, wherein the agent is a gateway foreign agent (GFA) and
2 the network translation device is a router to support NAT and GFA functionality.

1 20. The method of claim 16, wherein the first address is a Care of Address (CoA) and
2 the message is a mobile agent advertisement unicast message.

1 21. The method of claim 16, wherein the first request is a registration request of the
2 node to the home agent.

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1 22. The method of claim 16, wherein broadcasting the message to the agent:
2 the message is a mobile agent advertisement unicast message for the GFA to a
3 subnet, the subnet coupled to the network translation device and is derived from a
4 second address of the first request; and
5 the node, subsequent to the advertisement, is to generate a second request with a first
6 address to be derived from an address of the network translation device, and the
7 network translation device to forward the second request to the home agent via the
8 WAN.

1 23. The method of claim 22 wherein the second request is a registration request of the
2 node to the home agent.

1 24. An article comprising:

2 a storage medium having stored thereon instructions, that, when executed by a
3 computing platform, result in execution of locating an agent for a node in a
4 network address translation (NAT) domain by:
5 generating a first request;
6 forwarding the first request to a network translation device;
7 determining whether a first address of the first request is a non-routable address, if not,
8 forwarding the first request to a home agent, the home agent coupled to the network
9 translation device via a wide area network (WAN).

25. The article of claim 24, further comprising:

if the first address of the first request is the non-routable address,
deleting the first request and broadcasting a message to the agent; and
generating a second request wherein a first address of the second request is the
address of the network translation device.

1 26. The article of claim 24 wherein the node is a mobile node and is either one of a
2 cellular phone, laptop computer, personal digital assistant (PDA), or an Internet table.

1 27. The article of claim 24 wherein the first address is a Care of Address (CoA) and the
2 message is a mobile agent advertisement unicast message.

1 28. The article of claim 24 wherein the first request is a registration request of the node
2 to the home agent.

1 29. The article of claim 25 wherein broadcasting the message to the agent:
2 the message is a mobile agent advertisement unicast message for the GFA to a
3 subnet, the subnet coupled to the network translation device and is derived from a
4 second address of the first request; and
5 the node, subsequent to the advertisement, is to generate a second request with a first
6 address to be derived from an address of the network translation device, and the
7 network translation device to forward the second request to the home agent via the
8 WAN.

9 30. The article of claim 29 wherein the second request is a registration request of the
10 node to the home agent.

11 31. A method for allowing a node to locate an agent in a network address translation
12 (NAT) domain, the method comprising:

13 transmitting a first request from the node to a network translation device;

14 determining whether an first address of the first request is a non-routable
15 address; and

16 if so, deleting the first request and broadcasting a message to the agent.

17 32. The method of claim 31, further comprising:

18 forwarding the first request from the network translation device to a home agent if
19 the first address of the first request is not the non-routable address, the home agent
20 coupled to the network translation device via a wide area network (WAN).

1 33. The method of claim 31, wherein the node is a mobile node and is either one of a
2 cellular phone, laptop computer, personal digital assistant (PDA), or an Internet table.

1 34. The method of claim 31, wherein the agent is a gateway foreign agent (GFA).

1 35. The method of claim 31, wherein the network translation device is a router to
2 support NAT and GFA functionality.

1 36. The method of claim 31, wherein the first address is a Care of Address (CoA).

1 37. The method of claim 31, wherein the message is a mobile agent advertisement
2 unicast message for the GFA to allow the node to use foreign assisted routing.

1 38. The method of claim 31, wherein the message is a mobile agent advertisement
2 unicast message for the GFA to a subnet, the subnet coupled to the network translation
3 device and is derived from a second address of the first request.

1 39. The method of claim 31, wherein the first request is a registration request of the
2 node to the home agent.

1 40. The method of claim 37, wherein the node, subsequent to the advertisement, is to
2 generate a second request with a first address to be derived from an address of the

3 network translation device, and the network translation device to forward the second
4 request to the home agent via the WAN.

1 41. The method of claim 37, wherein to broadcast the message to the agent, the
2 network translation device forwards an error code to the mobile node derived from the
3 second address of the first request.

1 42. The method of claim 38 wherein the node, subsequent to the advertisement, is to
2 generate a second request with a first address to be derived from an address of the
3 network translation device, and the network translation device to forward the second
4 request to the home agent via the WAN.

1 43. The method of claim 38, wherein the network translation device forwards an error
2 code to the mobile node derived from the second address of the first request.

1 44. The method of claim 40, wherein the second request is a registration request of
2 the node to the home agent.

1 45. The method of claim 42, wherein the second request is a registration request of
2 the node to the home agent.